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Managing the operations-strategy interface through programme management

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Abstract

This paper explores how one company with globally distributed operations, strive to manage the operations-strategy interface through programme management. The paper focuses on how the organizational context affects the programme configuration and raises a number of propositions as to how programmes can be configured depending on organizational context. The propositions are meant as objects for further research and tentative managerial recommendations.

Key words: Operations-Strategy Interface, Global Operations Network, Programme Management

Introduction

A phenomenon, which has received much attention in the academic literature, is the acceleration of the globalization process, and how it has altered the industrial landscape (Sinha & Van de Ven, 2005; Daniels et al, 2002). Companies have spread out their operations, which has given birth to a new dominant organizational form, namely the global operations network (Shi & Gregory, 1998).

One of the most apparent consequences of the widespread of activities is a dramatic increase in the complexity of the organization and the managerial mechanisms required to orchestrate these networks, are currently poorly understood (Rudberg & Olhager, 2003; Bartlett & Ghoshal, 1991). One specific interface which is affected by this is the operations-strategy interface. Companies struggle to appropriately reconfigure and adapt their dispersed operations, in order to respond to and implement new emerging strategic agendas (Mintzberg et al, 2002).

One way in which companies strive to overcome this barrier, is by deploying a “programme approach” and the underlying logic of Programme Management (PM) (Pellegrinelli, 1997). There is still a lack of practical and theoretical consensus what PM is and how it should be defined (Pellegrinelli et al, 2007), however two schools of thoughts, defines the continuum where PM operates within. Spawned from the project management paradigm, some scholars, (e.g. Ferns, 1991) largely view PM as an extension of project management, making theoretical contributions aiming at understanding and allowing practitioners to undertake large scale projects often characterized as portfolios of projects (portfolio management). The purpose is here to coordinate and prioritize activities in order to extract synergies and reach improvements in terms of efficiency and effectiveness. The other point of departure is in the change

management paradigm. Here PM is more concerned with creating the link between strategy and operations (Murray-Webster & Thiry, 2000; Pellegrinelli, 2002) and programmes are viewed as the vehicle carrying the strategy (Thiry, 2002) and the driver for change in the organizational processes and practices (Laugen et al, 2005). The purpose is here to develop and maintain new organizational capabilities which allow the company to fulfil the strategic objectives. In between these two paradigms there are numerous shades of gray and while some (e.g. Thiry, 2002) arrive at the conclusion that this confusion is due to the nascent nature of PM, another conclusion might be that PM can simply serve different purposes in different settings. The latter conclusion is very much in line with the findings of (Pellegrinelli et al, 2007) who argue that no “one size fits all” and that programmes are context dependent in the sense that they have to match their organizational setting and purpose.

Yet very little research has been conducted shedding light on the actual configurations of programme management and exploring in more details what and how contextual factors within the organization influence the programme configuration. A dual purpose can be identified for doing so. From an academic point of view, the research is contributing to the existing body of PM literature by elaborating and exploring based on the conclusions and findings of prior work (e.g. Pellegrinelli et al, 2007; Lycett et al, 2004) and striving to make the PM literature more tangible and explicit as suggested by (Vereecke et al, 2003). Secondly, from a practitioner’s point of view, identifying how contextual factors within the organization influence programme configurations, allow for improved decision-making when configuring programmes for various purposes. This paper sets out to do exactly that and is framed by the research question of this paper:

How do contextual factors within an organization influence the configurations of programmes?

Methodology

The research is carried out as an exploratory case study (Yin, 2002), detailing the program efforts of one company with operations and activities in more than forty-five countries and employs 10.000+ people worldwide. The case study explores four different corporate programs within the company, focussing on developing and maintaining different organizational capabilities (note that all four programmes fall within the paradigm of programmes as vehicles for strategic change) and thereby linking the operations-strategy interface. The programmes are striving at developing capabilities for improving management-, production-, product development- and sales practices and performance in the case company.

Data selection

A theoretical framework for carrying out the research has been developed from leaning on the organizational development literature (Cameron & Green, 2004; Peppard & Rowland, 1005) as well as the PM literature (OGC, 2003; Pellegrinelli, 1997; Gray 1997, Vereecke, 2003). The purpose of framework is to operationalise “context” and “configuration” derived from the research question. The framework is build up by four “configuration *variables*”, that is 1) how the programme is configured in order to develop and maintain the required organizational capabilities (both “software” and “hardware”), 2) the implementation approach, 3) governance mechanisms and finally 4) the learning mechanisms in place. In addition, four organizational contextual *factors* surrounding the programme configuration are included: 1) the organizational perception

& purpose, 2) the scope, 3) the embedded knowledge base, and 4) the performance criteria of the programme. The framework is depicted in figure 1.

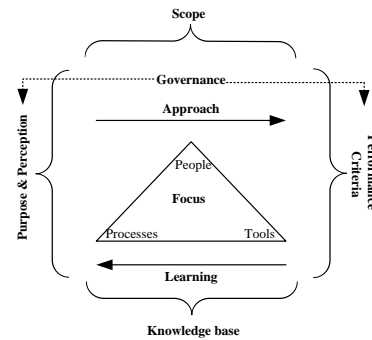


Figure 1: Theoretical framework

Configuration variables

“Approach” (Vereecke et al, 2003) relates to the implementation rhythm or method. As measurements, it has been decided to evaluate whether the programme is configured so that it is “pushed” (top-down/centralized characteristics) from the top management onto the local sites or if the programme configured to create a “pull” (bottom-up/decentralized characteristics) from the local sites or perhaps both. “Governance” (OGC, 2003) relates to how the programme configuration ensures continuous progress and evaluates actual performance compared to the strategic task at hand and is evaluated whether it is “result-“ or “process oriented”. “Learning” (Thiry, 2002) is an expression of the whether formal or informal learning mechanisms are in place to ensure alignment and improvement of the overall programme configuration. “Organizational capabilities” are often referred to as the combination of people, processes and tools (e.g. Morgan & Liker, 2006). “Focus” is an expression on whether the programme configuration focuses on one or any combination of the three dimensions.

Contextual factors

“Purpose & perception” expresses the commitment and sense of urgency, which by (Kotter, 2007) are mentioned as critical when addressing organizational change. “Scope” is an expression of the width (number of value chain processes) and depth (number of hierarchical layers) of the programme and measured in terms of complexity. This is expected to have an impact from both a stakeholder and risk management perspective, as mentioned by (OGC, 2003). “Performance criteria” relates to whether the programme is addressing a short term or long term goal and operationalises what (ibid) refers to as benefit management. The “knowledge base” is an expression of how much the organization knows about the required capabilities.

Data collection

Data was collected in three rounds in the spring of 2011. The first round focussed on obtaining an understanding of the background, purpose and timeline of the programme and carried through with retro perspective lenses. The second round focussed on managerial and corporate considerations and aspects, while the third round addressed operational issues and challenges. While the first rounds were more loosely structured and evolving in nature depending on the responses, the second and third rounds were strongly directed by the theoretical framework as interview guide asking direct and follow up questions regarding each of the five constructs. Interviewees included the programme manager, a corporate programme officer and a local programme agent from

each programme. Where geography allowed, the interviews were carried out face to face, while the rest took place over the web. In addition, printed materials, e.g. various presentations, process descriptions, training material and information on intranet were used to triangulate the data.

Case Study

The following section presents four short case narratives, describing the configuration variables and the contextual factors of the four programmes. The findings are summarized in table 1 at the end of the section.

EFQM Excellence implementation

Up the through eighties and nineties, the case company had spread its activities across the globe and as a result, the company experienced difficulties aligning and directing the now more than eighty sites. Based on experiences from working with self governing production teams, the top management decided to launch a corporate programme with the purpose of implementing the EFQM Excellence framework (EFQM, 2011) in order to get a common management framework for all sites within the company. By working with a common framework, the managers would get a common language and common sense of direction, in addition to creating the foundation for sharing best practices and learning from each others experiences. At the core of the framework are cross-company assessments, where trained internal auditors from other sites assess the management practices at a local site. Based on this assessment, direction and areas for improvement are presented to the company, giving birth to a continuous improvement spiral aiming at achieving the company vision.

Context: The top management was highly committed to the programme, however knew that they had to be patient with the implementation. First of all, since the large scope spanned all management levels at all corporate sites, implementation would be a slow moving process. In addition, it was a cultural offset for the management to have peers from other sites to come and assess their management approaches. Furthermore, on the short track, there was no clear evidence that the competitiveness of the company was threatened which was also reflected the performance criteria, which focussed on the process itself, continuous improvement and long-term strategic benefits. The case company partnered with external consultants to assist them in the implementation process, since the practical knowledge base within the company was limited to a few people.

Configuration: The case company decided to configure the programme based on “pull” approach and therefore no companies were forced implement the programme. The reasoning for this, was that the programme should not be implemented for the sake of the programme, but because local managers actually bought into the idea and concepts behind the programme. The focus of the programme was therefore to create commitment and accept of the programme through comprehensive trainings, where managers received theoretical education and practical experience in the use of the framework. In addition, focus was put on communication of results, from companies who had implemented the framework and experienced improvements in business results and process maturity. In addition, relevant managers who had implemented the programme were recognized in appropriate forums and the top management laid out a career path related to the programme where prestige and personal development opportunities were gained from involvement in the programme. One of the key purposes of the corporate function was to assist and support local sites when deciding to begin the implementation and thereby lessen the workload and minimizing the barriers of

implementation. In addition, the corporate programme function gathered feedback through out the implementation process in order to customize the framework to the organization. As a result of this approach, the case company experienced a slow but exponential implementation curve where the programme implementation spread like ripples in water.

Lean manufacturing implementation

As the Japanese production principles summarized in lean manufacturing (Womack et al, 1991) established itself as the new production paradigm up through the eighties and nineties, the case company had undertaken several local initiatives to implement these principles and methods. However, a benchmarking analysis with *world class manufacturers* (Laugen, 2005) revealed that the company was far from the *world class manufacturers* in terms of competitiveness. In the early zeros, top management launched an initiative with the purpose to collect and compare the results of the local lean efforts. Results showed a wide diversity of focus and results and it was decided to launch a corporate programme which encapsulated all the local initiatives under one umbrella, with the purpose of obtaining a more homogenous approach to lean manufacturing so that direction, sharing of best practices and continuous improvement were all made possible.

Context: The top management made a strong commitment to improve the competitiveness through lean manufacturing and invested considerable resources in the development of the lean programme. The company already possessed a large knowledge base related to the tools and techniques of lean manufacturing and the programme primarily aimed at improving operational performance at the local sites. The width of the programme was relatively narrow and defined within the production processes, while the depth spanned all layers, from the shop floor to top management in the company.

Configuration: Initially the programme was rolled out in large scale at all major production sites, applying mandatory lean tools in well defined intervals with the objective of reaching defined targets, characterizing the approach more as “push”. The programme was governed by a few clear KPIs and progress was measured in terms of improvement in those KPIs. Later, however, the programme function came to the realization that focussing on tools was far from enough. It was required to get local management buy in to the programme in order to reach sustainable results. Similar to the other programmes, the case company set up a network programme organization and facilitated regular meetings with the purpose of addressing challenges, follow up on progress and share best practices. Even though “learning” was a part of this forum, no formal procedures were set up to align and adjust the programme for the local contexts.

Concurrent Engineering

As the case company accelerated its internationalization process up through the nineties the supply chain structures grew more and more complex, in addition to a high variety in local organizational capabilities. Previously, the case company had introduced newly developed products and production lines at a ramp factory at the HQ location and then, later, transferred the lines to appropriate production sites. As a result of this set up, all knowledge related to the production lines were embedded in the ramp-up factory and the company experienced penalties in terms of speed, quality and delivery reliability, when production lines were offshored and often faced the task of product or process reengineering, since the lines did not match the local conditions. Top management

initiated a concurrent engineering programme, with the purpose of taking the local supply chain considerations into account during the development process.

Context: The case company felt a strong sense of urgency, since one of the key business drivers for the company had always been to introduce innovative and quality products to the market. Due to the complexities of internationalization, this capability was now threatened and there was a strong commitment and consensus that the company had to take action in order to sustain competitiveness. The case company had little practical experience or theoretical insight with regards to the challenges related concurrent engineering in global operations network. However, since the programme had relative small depth and width (the product developed process and the production site in question) the case company initiated a programme which was highly experimental with a mindset of “trial and error” in order to develop the appropriate organizational capabilities.

Configuration: The approach was highly evolutionary and governed by KPIs, starting within one project development project and then with several formal iterative learning loops. The primary focus of the programme was to develop the right competencies and behaviour. Often working within a cross cultural setting with stakeholders from across the supply chain, the programme agents were required to possess highly developed “human interaction” skills. In addition, focus was highly directed at defining the value and contribution of the concurrent engineering programme, not only in terms of when the production lines were handed over to the local factories, but also during the development phases. There was a clear need to define the value and purpose of having the programme agent on board during the development phases to that resistance from product development team was kept to a minimum.

Sales BPR

The market conditions in which the case company operated changed during the nineties and zeros and opposed to previously, where the sales channels were mainly direct or distribution sales, the case company now found itself in a position where project sales constituted a large part of the sales efforts. This sales channel was very different from the two familiar channels and management attention was directed towards the business opportunities in improving the sales processes and fitting them with the new market requirements. This led the company to initiate a business process reengineering program to improve the local sales processes.

Context: Even though the top management had made a commitment to the programme, it was not to interfere with the day-to-day operations, since the primary focus had to be on the sales efforts. In addition, there was a common understanding that it would take time before the programme showed an actual effect on the bottom line. In addition, working with processes did not necessarily fit the mindset of several sales managers, since “every sale and customer is unique”.

Configuration: The implementation was based on a “pull” principle, leaving it up to the local sites when to begin the implementation. The corporate programme organization focussed on addressing “what’s in it for me?” for the different stakeholders and facilitated and supported the implementation process heavily in the early stages. In addition, focus was on communicating and making the programme visible for the global organization through published material and various IT platforms. Given a low knowledge base about sales in any given region, the implementation of the programme took a starting point in the local context and from that decided on the coming steps in the implementation of the programme. As mentioned, there was a common understanding that it would take time before the programme yielded results on the

bottom line and as result, the programme was governed from a process perspective, e.g. process maturity levels, number of implementation steps taken, initiatives related to sharing of best practice, etc.

Sum up

The configurations and contextual variables are summed up in table 1. The following discussion will take an outset in this table and shed light on what and how the different contextual factors influences the configuration.

Table 1: Sum up table of the four programmes and the surrounding contextual factors and configuration variables

	EFQM	Lean	Concurrent Engineering	Sales BPR
Context	Purpose & role	Sporadic commitment Low urgency	Sporadic commitment High urgency	High commitment High urgency
	Scope	Highly complex	Complex	Simple
	Performance criteria	Strategic focus	Operational focus	Operational focus
	Knowledge base	Undefined	Well defined	Undefined
Configuration	Approach	Pull Ripple effect	Push Large scale	Push Evolutionary
	Focus	People Process	People Process	People Process
	Governance	Process	Results	Results
	Learning	Formal	Informal	Formal

Discussion

As depicted in table 1 the case study of the four programmes, show four different configurations.

Firstly, the approach to the implementation differs between push and pull characteristics. Taking an outset in the EFQM and Sales BPR programmes, the programmes was initiated by top management, based on the firm belief that in the long run, implementation would lead to strategic benefits. There was no “burning platform” and the organizational perception of the programme was one of sporadic commitment and low/medium urgency. The top management was aware of this and instead of trying to push the programme onto the organization, the programme configuration focused on creating a pull effect, through training, communication of results and personal recognition and incentive mechanisms, allowing relevant stakeholders to buy in to the concepts and underlying logic of the programme.

On the contrary, focussing on the concurrent engineering and lean programmes, the organizational perceptions of the programmes was characterized by higher commitment and urgency. Coming to the realization that competitiveness was threatened, there was a large commitment to build up and maintain the required capabilities in order to continue to introduce innovative and quality products to the market and produce according to proven effective and efficiency lean principles. Not wanting to fall behind *world class manufacturers*, the programme was configured according to push principle.

In addition, there is an additional link to the performance criteria and governance mechanisms. Somewhat self-evident, the case study suggests that a high

urgency and commitment is related to an operational focus and vice versa, a low urgency and commitment is related to a strategic focus. It seems almost self explanatory that high urgency will lead to a focus on short term operational results. One can argue the *means* or processes are pushed in the background when competitiveness is threatened. On the other hand, when focussing on sustaining and developing a long term results, the *means* receives high focus since it is those means that will sustain the performance over time.

The case study suggests that when the organizational perception is low, the programme configuration should focus and strive at creating a pull effect through e.g. training, communication and recognition and personal incentives such as career paths or bonuses. This will result in a slower implementation process and effects focussed on performance will be postponed, why it makes sense to govern the programme in a process oriented way. On the other hand, when the organizational perception of the programme is high, the programme should be configured according to a push principle allowing for a faster implementation and effect on relevant business results. This leads to the following set of propositions:

Proposition 1: *Programmes which focuses on long term strategic benefits with initial low/sporadic commitment and low sense of urgency, is likely to have process oriented governance mechanisms and characterized by pull implementation.*

Proposition 2: *Programmes which focuses on creating short term results with initial high commitment and urgency, is likely to have result oriented governance mechanisms and characterized by “push” implementation.*

From a managerial point of view, these two propositions are interesting, since they at first glance seem counterintuitive. One could expect that when the organizational perception is low, it would be required from the top management to push the implementation and when the organizational perception is high, the programme should be configured to create the pull. However, given it more thought, it seems to add little value focussing on creating a pull effect, when the organizational commitment is already present and by pushing the programme onto the organization without having the commitment and accept, it is very likely that intended capability build up will not be sustained over time.

Continuing with an outset in the different approaches to the implementation, the case study reveals a difference whether the implementation is highly conceptualized, planned and launched in large scale as the case with the lean programme or more experimental and evolutionary as the other three programmes. Again taking an outset in the lean programme, the programme was initiated by collecting all previous local efforts. The case company had worked with lean for many years and as a result the knowledge base was well defined. Planning and launching a programme in large scale require both a high sense of direction and ability to articulate what exactly should happen when and how. On the other hand, looking at three other programmes, the knowledge base was low and the task was to develop “unknown” capabilities. As a result the programmes were more experimental versus launching at multiple sites at once.

One can argue that the knowledge base represents one dimension of the uncertainty surrounding the programme, where programmes leaning on a large knowledge base have a smaller degree of uncertainty compared to programmes leaning on a small or no knowledge base. Another contextual factor adding to this uncertainty is

the scope of the programme. Spanning multiple organizational processes, department, geographical regions and hierarchical layers, the uncertainty can be argued to increase proportionally. Taking the examples of the Sales BPR and the EFQM programme, it was decided to implement the programme like ripples in the water, starting at one given site, building up experience and move on from there. From a managerial point of view, it is very likely that there is a limit to how much uncertainty a programme can comprehend in order to be successful in terms of implementation. Therefore, when focusing on developing and maintaining unknown organizational capabilities, often it is required to take an evolutionary and experimental approach to slowly but steady increase the knowledge base before continuing with the implementation and thereby managing the insecurity surrounding the programme. This leads to the following two propositions:

Proposition 3: *Programmes surrounded by high uncertainty, that is a low knowledge base and complex scope is likely have an evolutionary implementation approach, spreading from one part of the organization to others. Formal learning loops should be in place to continuously increase the knowledge base.*

Proposition 4: *Programmes surrounded by low uncertainty, that is a high knowledge base and/or simple scope, is likely to have an implementation approach characterized as “large scale” or through a plan-do-check-act (or similar) methodology.*

Objects for further Research

Throughout the discussion, four propositions were presented related to how context affect the configuration of programmes. One immediate object for further research would be to empirically test these propositions. An important feature of this test should be testing these propositions against the performance of the programmes, in order to make substantial managerial recommendations.

Another interesting object for further research would be to study the programmes over time. This case study is a “snapshot” of the four programmes, however as mentioned in the discussion, the organization can be expected to e.g. slowly build up the knowledge base. In addition, the organizational perception of the programme can be expected to change over time due to changes in the environment or the results delivered by the programme in the early phases. These dynamics raises an interesting question. As proposed, programmes should be configured according to context. However, since the programmes can be expected to continuously influence the context, should they not be reconfigured accordingly? This question seems highly relevant and proposes a whole new set of challenges for academics and practitioners working with programmes as means to manage the operations-strategy interface.

Conclusion

This paper set out to investigate the following research question:

How do contextual factors within an organization influence the configurations of programmes?

“Context” was operationalised in terms of four factors: organizational perception, scope, performance and knowledge base. “Configuration of programmes” was operationalised in terms of four variables: approach, focus, governance and learning. The case study revealed a self-evident relationship between the formalization of learning mechanisms

and the knowledge base within the organization. In addition, the case study suggested four propositions with interesting academic and managerial perspectives.

This paper suggests an interesting relationship between the programme and organizational context. While the contextual factors influence the configuration of the programme, the programme, over time, can be expected to influence the contextual factors. This dual and dynamic relationship raises a number of managerial and academic challenges, suggesting that programmes should be configured and reconfigured over time to continuously match the organizational context and assist in managing the operations-strategy interface.

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